

NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
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NEWS WWW	CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 14:25:25 ON 11 AUG 2005

FILE 'REGISTRY' ENTERED AT 14:25:35 ON 11 AUG 2005  
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STRUCTURE FILE UPDATES: 10 AUG 2005 HIGHEST RN 859511-21-0  
DICTIONARY FILE UPDATES: 10 AUG 2005 HIGHEST RN 859511-21-0

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> S 139-13-9/RN  
L1 1 139-13-9/RN

=> S 142-73-4/RN  
L2 1 142-73-4/RN

=> file medline  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
FULL ESTIMATED COST ENTRY SESSION  
0.86 1.07

FILE 'MEDLINE' ENTERED AT 14:26:36 ON 11 AUG 2005

FILE LAST UPDATED: 9 AUG 2005 (20050809/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /GT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 11  
L3 702 L1

=> s 12  
L4 125 L2

=> s 13 or 14  
L5 821 L3 OR L4

=> s biotin  
18221 BIOTIN  
48 BIOTINS  
L6 18227 BIOTIN  
(BIOTIN OR BIOTINS)

=> s 16 and 15  
L7 5 L6 AND L5

=> s phosphoprotein? or (phosphorylated protein?)  
34750 PHOSPHOPROTEIN?  
36983 PHOSPHORYLATED  
1832366 PROTEIN?  
2167 PHOSPHORYLATED PROTEIN?  
(PHOSPHORYLATED(W) PROTEIN?)  
L8 36108 PHOSPHOPROTEIN? OR (PHOSPHORYLATED PROTEIN?)

=> s 18 and 15  
L9 5 L8 AND L5

=> s 19 and 17  
L10 0 L9 AND L7

=> d ibib 17 1-5

L7 ANSWER 1 OF 5 MEDLINE on STN  
ACCESSION NUMBER: 2005206297 MEDLINE

DOCUMENT NUMBER: PubMed ID: 15839649  
TITLE: Electrogeneration of a poly(pyrrole)-NTA chelator film for a reversible oriented immobilization of histidine-tagged proteins.  
AUTHOR: Haddour Naoufel; Cosnier Serge; Gondran Chantal  
CORPORATE SOURCE: Laboratoire d'Electrochimie Organique et de Photochimie Redox (CNRS UMR 5630), Institut de Chimie Moleculaire de Grenoble FR CNRS 2607, Universite Joseph Fourier, BP 53, 38041 Grenoble Cedex 9, France.  
SOURCE: Journal of the American Chemical Society, (2005 Apr 27) 127 (16) 5752-3.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200507  
ENTRY DATE: Entered STN: 20050421  
Last Updated on STN: 20050726  
Entered Medline: 20050725

L7 ANSWER 2 OF 5 MEDLINE on STN  
ACCESSION NUMBER: 2003464070 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 14526081  
TITLE: Self-assembly of proteins into designed networks.  
AUTHOR: Ringler Philippe; Schulz Georg E  
CORPORATE SOURCE: Institut fur Organische Chemie und Biochemie, Albert-Ludwigs-Universitat Freiburg, Albertstrasse 21, D-79104 Freiburg im Breisgau, Germany.  
SOURCE: Science, (2003 Oct 3) 302 (5642) 106-9.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200310  
ENTRY DATE: Entered STN: 20031004  
Last Updated on STN: 20031025  
Entered Medline: 20031024

L7 ANSWER 3 OF 5 MEDLINE on STN  
ACCESSION NUMBER: 97373802 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 9230285  
TITLE: Iron-induced apoptosis in mouse renal proximal tubules after an injection of a renal carcinogen, iron-nitritotriacetate.  
AUTHOR: Kawabata T; Ma Y; Yamador I; Okada S  
CORPORATE SOURCE: Department of Pathology, Okayama University Medical School, Shikata-cho, Japan.  
SOURCE: Carcinogenesis, (1997 Jul) 18 (7) 1389-94.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199708  
ENTRY DATE: Entered STN: 19970813  
Last Updated on STN: 19970813  
Entered Medline: 19970807

L7 ANSWER 4 OF 5 MEDLINE on STN  
ACCESSION NUMBER: 97317982 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 9174965  
TITLE: Interactions and applications of soluble heterobifunctional affinity chelating polymers in immobilized metal affinity

AUTHOR: chromatography.  
CORPORATE SOURCE: Ehteshami G; Porath J; Guzman R  
Department of Chemical and Environmental Engineering,  
University of Arizona, Tucson 85721, USA.  
SOURCE: Journal of molecular recognition : JMR, (1996 Sep-Dec) 9  
(5-6) 733-7.  
Journal code: 9004580. ISSN: 0952-3499.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199708.  
ENTRY DATE: Entered STN: 19970902  
Last Updated on STN: 19970902  
Entered Medline: 19970818

L7 ANSWER 5 OF 5 MEDLINE on STN  
ACCESSION NUMBER: 96207226 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 8619473  
TITLE: Single-step synthesis and characterization of biotinylated  
nitritotriacetic acid, a unique reagent for the detection  
of histidine-tagged proteins immobilized on nitrocellulose.  
AUTHOR: McMahan S A; Burgess R R  
CORPORATE SOURCE: McArdle Laboratory for Cancer Research, University of  
Wisconsin-Madison, 53706, USA.  
CONTRACT NUMBER: CA07175 (NCI)  
SOURCE: GM28575 (NIGMS)  
Analytical biochemistry, (1996 Apr 5) 236 (1) 101-6.  
Journal code: 0370535. ISSN: 0003-2697.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199606  
ENTRY DATE: Entered STN: 19960620  
Last Updated on STN: 19970203  
Entered Medline: 19960613

=> d ibib abs kwic 17 4

L7 ANSWER 4 OF 5 MEDLINE on STN  
ACCESSION NUMBER: 97317982 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 9174965  
TITLE: Interactions and applications of soluble heterobifunctional  
affinity chelating polymers in immobilized metal affinity  
chromatography.  
AUTHOR: Ehteshami G; Porath J; Guzman R  
CORPORATE SOURCE: Department of Chemical and Environmental Engineering,  
University of Arizona, Tucson 85721, USA.  
SOURCE: Journal of molecular recognition : JMR, (1996 Sep-Dec) 9  
(5-6) 733-7.  
Journal code: 9004580. ISSN: 0952-3499.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199708  
ENTRY DATE: Entered STN: 19970902  
Last Updated on STN: 19970902  
Entered Medline: 19970818

AB The interaction of immobilized metal-chelating adsorbents with a dual  
heterobifunctional soluble polyethylene glycol (PEG) of the form X-PEG-Y  
is described, where X represents an affinity ligand and Y a chelating  
agent. The bifunctional PEG derivative used in this study was

biotin-PEG-iminodiacetic acid (IDA). Affinity and metal binding constants of this conjugate for copper and avidin were found to be in excellent agreement with the binding affinities of the corresponding unconjugated groups IDA and biotin, respectively. The characteristics of the interaction of this bifunctional derivative is described in terms of its adsorption in immobilized metal affinity chromatographic (IMAC) adsorbents. The results show that this derivative can be reversibly and selectively bound to specific IMAC adsorbents under certain experimental conditions. This immobilized scheme resembles a system where an IMAC adsorbent was transformed into an affinity adsorbent as a result of the interactions of both chelating derivatives, one in solution (biotin-PEG-IDA) and the other on the solid matrix (IMAC adsorbent). Apparently the modified IMAC adsorbents, once the affinity chelating ligands are attached, exhibit characteristics similar to those of covalently bound affinity ligands in affinity chromatographic systems.

AB . . . where X represents an affinity ligand and Y a chelating agent. The bifunctional PEG derivative used in this study was biotin -PEG-iminodiacetic acid (IDA). Affinity and metal binding constants of this conjugate for copper and avidin were found to be in excellent agreement with the binding affinities of the corresponding unconjugated groups IDA and biotin, respectively. The characteristics of the interaction of this bifunctional derivative is described in terms of its adsorption in immobilized metal . . . adsorbent was transformed into an affinity adsorbent as a result of the interactions of both chelating derivatives, one in solution (biotin-PEG-IDA) and the other on the solid matrix (IMAC adsorbent). Apparently the modified IMAC adsorbents, once the affinity chelating ligands are. . .

CT      Avidin  
          Biotin  
\*Chelating Agents: CH, chemistry  
\*Chromatography, Affinity: MT, methods  
\*Imino Acids: CH, chemistry  
\*Nickel  
\*Polyethylene Glycols: CH, chemistry  
\*Polymers: CH, . . .

RN      1405-69-2 (Avidin); 142-73-4 (iminodiacetic acid); 58-85-5  
(Biotin); 7440-02-0 (Nickel)

=> d ibib kwic 17 5

L7      ANSWER 5 OF 5      MEDLINE on STN  
ACCESSION NUMBER: 96207226      MEDLINE  
DOCUMENT NUMBER: PubMed ID: 8619473  
TITLE:      Single-step synthesis and characterization of biotinylated nitrilotriacetic acid, a unique reagent for the detection of histidine-tagged proteins immobilized on nitrocellulose.  
AUTHOR:      McMahan S A; Burgess R R  
CORPORATE SOURCE: McArdle Laboratory for Cancer Research, University of Wisconsin-Madison, 53706, USA.  
CONTRACT NUMBER: CA07175 (NCI)  
              GM28575 (NIGMS)  
SOURCE:      Analytical biochemistry, (1996 Apr 5) 236 (1) 101-6.  
              Journal code: 0370535. ISSN: 0003-2697.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE:      English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199606  
ENTRY DATE:      Entered STN: 19960620  
              Last Updated on STN: 19970203  
              Entered Medline: 19960613  
AB      . . . Using a one-step reaction, a bifunctional compound was synthesized for detecting histidine-tagged proteins immobilized on

nitrocellulose. This compound has a biotin as one functional group and a nitrilotriacetic acid as the other. The nitrilotriacetic acid is used to chelate a Ni(II). . . at four of its six coordination sites. The remaining two sites are available for binding to a histidine tag. The biotin functional group can then be detected using a streptavidin-horseradish peroxidase conjugate and chemiluminescence. Using this biotinylated nitrilotriacetic acid, it is. . . .

CT      \*Biotin: AA, analogs & derivatives  
          \*Blotting, Western: MT, methods  
          Collodion: CH, chemistry  
          Hela Cells  
          \*Histidine: CH, chemistry  
          Humans

RN Humans  
Lysine: AA, analogs. . .  
139-13-9 (Nitrilotriacetic Acid); 56-87-1 (Lysine); 576-19-2  
(biocytin); 58-85-5 (Biotin); 71-00-1 (Histidine); 7440-02-0  
(Nickel); 9004-70-0 (Collodion)

=> file caplus  
COST IN U.S. DOLLARS  
  
FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
3.61	4.68

FILE 'CAPLUS' ENTERED AT 14:29:54 ON 11 AUG 2005  
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FILE COVERS 1907 - 11 Aug 2005 VOL 143 ISS 7  
FILE LAST UPDATED: 10 Aug 2005 (20050810/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l1  
L11 5866 L1

=> s 12  
L12 2683 L2

=> s 111 or 112  
L13 7763 L11 OR L12

```
=> s biotin
      27720 BIOTIN
      107 BIOTINS
L14      27729 BIOTIN
          (BIOTIN OR BIOTINS)
```

=> s 114 and 113  
L15 . . . . . 59 L14 AND L13

=> s 114 (S) 113  
L16 1 L14 (S) L13

=> d ibib

L16 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1997:335638 CAPLUS  
DOCUMENT NUMBER: 127:113815  
TITLE: Interactions and applications of soluble  
heterobifunctional affinity chelating polymers in  
immobilized metal affinity chromatography  
AUTHOR(S): Ehteshami, Gholam; Porath, Jerker; Guzman, Roberto  
CORPORATE SOURCE: Dep. Chem. and Environmental Eng., Univ. Arizona,  
Tucson, AZ, 85721, USA  
SOURCE: Journal of Molecular Recognition (1996), 9(5/6),  
733-737  
CODEN: JMOR4; ISSN: 0952-3499  
PUBLISHER: Wiley  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s metal (S) chelate  
1586829 METAL  
804547 METALS  
1925374 METAL  
(METAL OR METALS)  
42846 CHELATE  
26684 CHELATES  
56804 CHELATE  
(CHELATE OR CHELATES)  
L17 16297 METAL (S) CHELATE

=> s 117 and biotin  
27720 BIOTIN  
107 BIOTINS  
27729 BIOTIN  
(BIOTIN OR BIOTINS)  
L18 48 L17 AND BIOTIN

=> s biotin?  
L19 34792 BIOTIN?

=> s 119 (S) 117  
L20 15 L19 (S) L17

=> s phosphoprotein? or (phosphorylated protein)  
45761 PHOSPHOPROTEIN?  
49755 PHOSPHORYLATED  
1771752 PROTEIN  
1232953 PROTEINS  
2059138 PROTEIN  
(PROTEIN OR PROTEINS)  
2684 PHOSPHORYLATED PROTEIN  
(PHOSPHORYLATED(W) PROTEIN)  
L21 47200 PHOSPHOPROTEIN? OR (PHOSPHORYLATED PROTEIN)

=> s 121 and 120  
L22 0 L21 AND L20

=> s 120 and phospho  
10189 PHOSPHO

12 PHOSPHOS  
10201 PHOSPHO  
(PHOSPHO OR PHOSPHOS)  
L23 0 L20 AND PHOSPHO

=> s 120 and (label or detec?)  
57629 LABEL  
19525 LABELS  
69004 LABEL  
(LABEL OR LABELS)  
1485448 DETEC?  
L24 8 L20 AND (LABEL OR DETEC?)

=> s 124 not py>2002  
2913018 PY>2002  
L25 6 L24 NOT PY>2002

=> d ibib 1-3

L25 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2001:593243 CAPLUS  
DOCUMENT NUMBER: 135:164456  
TITLE: Method for carrying out a homogeneous-immunoassay  
based on agglutination using Fab'-biotin  
INVENTOR(S): Deger, Arno; Guillot, Francois; Berger, Michael;  
Schlieper, Dittmar  
PATENT ASSIGNEE(S): Boehringer Mannheim G.m.b.H., Germany  
SOURCE: U.S., 8 pp., Cont.-in-part of U.S. Ser. No. 71,593,  
abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6274325	B1	20010814	US 1994-314432	19940928
DE 4020204	A1	19920102	DE 1990-4020204	19900625
PRIORITY APPLN. INFO.:			DE 1990-4020204	A 19900625
			US 1991-715593	B2 19910621
			US 1991-718798	B1 19910621
			US 1993-71593	B2 19930603

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:308592 CAPLUS  
DOCUMENT NUMBER: 130:308808  
TITLE: Method for affinity labelling of oligomers or polymers  
INVENTOR(S): Lopez-Calle, Eloisa; Henco, Karsten  
PATENT ASSIGNEE(S): EVOTEC BioSystems A.-G., Germany  
SOURCE: Ger. Offen., 14 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE. 19745001	A1	19990506	DE 1997-19745001	19971011
PRIORITY APPLN. INFO.:			DE 1997-19745001	19971011

L25 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:324967 CAPLUS  
 DOCUMENT NUMBER: 129:3853  
 TITLE: Receptor binding assay, appropriate recombinant fusion receptor for this assay, vector for its production and reagent kit for implementing the receptor binding assay  
 INVENTOR(S): Loos, Ulrich; Minich, Waldemar B.  
 PATENT ASSIGNEE(S): B.R.A.H.M.S Diagnostica G.m.d.H., Germany; Loos, Ulrich; Minich, Waldemar B.  
 SOURCE: PCT Int. Appl., 43 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9820343	A2	19980514	WO 1997-EP6121	19971105
WO 9820343	A3	19980716		
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19645729	C1	19980604	DE 1996-19645729	19961106
DE 19728991	A1	19990211	DE 1997-19728991	19970707
EP 938679	A2	19990901	EP 1997-952757	19971105
EP 938679	B1	20020724		
R: AT, BE, CH, DE, FR, IT, LI				
JP 2001505764	T2	20010508	JP 1998-521059	19971105
AT 221204	E	20020815	AT 1997-952757	19971105
PRIORITY APPLN. INFO.:			DE 1996-19645729	A 19961106
			DE 1997-19728991	A 19970707
			WO 1997-EP6121	W 19971105

=> d kwic 1

L25 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB . . . carry streptavidin or avidin. The invention also concerns the Fab'-biotin which is bound or linked via linkage groups to a label compound which can electrochemiluminesce. The particles having avidin or streptavidin on their surface are magnetic. Use of anti-TSH Fab'-biotin conjugate. . .  
 IT Chelates  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (as labels; homogeneous agglutination immunoassay using  
 Fab'-biotin and avidin or streptavidin agglutinatable particles)  
 IT Luminescence, chemiluminescence  
 (electrochemiluminescence, labels for; homogeneous  
 agglutination immunoassay using Fab'-biotin and avidin or streptavidin  
 agglutinatable particles)  
 IT Ligands  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (multidentate, as labels; homogeneous agglutination  
 immunoassay using Fab'-biotin and avidin or streptavidin agglutinatable  
 particles)  
 IT 110-86-1D, Pyridine, derivs., uses 10199-00-5, Bipyrazine 12678-01-2D,  
 Phenanthroline, derivs. 37275-48-2, Bipyridyl  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (as label; homogeneous agglutination immunoassay using  
 Fab'-biotin and avidin or streptavidin agglutinatable particles)  
 IT 7439-88-5D, Iridium, metal chelates, uses  
 7439-98-7D, Molybdenum, metal chelates, uses  
 7440-04-2D, Osmium, metal chelates, uses 7440-05-3D,  
 Palladium, metal chelates, uses 7440-06-4D,  
 Platinum, metal chelates, uses 7440-15-5D, Rhenium,

metal chelates, uses 7440-16-6D, Rhodium,  
metal chelates, uses 7440-18-8D, Ruthenium,  
metal chelates, uses 7440-26-8D, Technetium,  
metal chelates, uses 7440-33-7D, Tungsten,  
metal chelates, uses 7440-47-3D, Chromium,  
metal chelates, uses 7440-50-8D, Copper, metal  
chelates, uses 7440-74-6D, Indium, metal  
chelates, uses

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(homogeneous agglutination immunoassay using Fab'-biotin and  
avidin or streptavidin agglutinatable particles)

=> file his

'HIS' IS NOT A VALID FILE NAME

SESSION CONTINUES IN FILE 'CAPLUS'

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files  
that are available. If you have requested multiple files, you can  
specify a corrected file name or you can enter "IGNORE" to continue  
accessing the remaining file names entered.

=> d his

(FILE 'HOME' ENTERED AT 14:25:25 ON 11 AUG 2005)

FILE 'REGISTRY' ENTERED AT 14:25:35 ON 11 AUG 2005

L1 1 S 139-13-9/RN  
L2 1 S 142-73-4/RN

FILE 'MEDLINE' ENTERED AT 14:26:36 ON 11 AUG 2005

L3 702 S L1  
L4 125 S L2  
L5 821 S L3 OR L4  
L6 18227 S BIOTIN  
L7 5 S L6 AND L5  
L8 36108 S PHOSPHOPROTEIN? OR (PHOSPHORYLATED PROTEIN?)  
L9 5 S L8 AND L5  
L10 0 S L9 AND L7

FILE 'CAPLUS' ENTERED AT 14:29:54 ON 11 AUG 2005

L11 5866 S L1  
L12 2683 S L2  
L13 7763 S L11 OR L12  
L14 27729 S BIOTIN  
L15 59 S L14 AND L13  
L16 1 S L14 (S) L13  
L17 16297 S METAL (S) CHELATE  
L18 48 S L17 AND BIOTIN  
L19 34792 S BIOTIN?  
L20 15 S L19 (S) L17  
L21 47200 S PHOSPHOPROTEIN? OR (PHOSPHORYLATED PROTEIN)  
L22 0 S L21 AND L20  
L23 0 S L20 AND PHOSPHO  
L24 8 S L20 AND (LABEL OR DETEC?)  
L25 6 S L24 NOT PY>2002

=> file pctfull

COST IN U.S. DOLLARS

SINCE FILE  
ENTRY

FULL ESTIMATED COST

TOTAL  
SESSION

32.10 36.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE  
ENTRY

CA SUBSCRIBER PRICE

TOTAL  
SESSION

-0.73 -0.73

FILE 'PCTFULL' ENTERED AT 14:34:05 ON 11 AUG 2005  
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FILE LAST UPDATED: 9 AUG 2005 <20050809/UP>  
MOST RECENT UPDATE WEEK: 200531 <200531/EW>  
FILE COVERS 1978 TO DATE

>>> IMAGES ARE AVAILABLE ONLINE AND FOR EMAIL-PRINTS <<<

=> s nta  
7276 NTA  
24 NTAS  
L26 7296 NTA  
(NTA OR NTAS)

=> s nitriloacetic acid  
921 NITRILOAETIC  
245294 ACID  
164169 ACIDS  
254679 ACID  
(ACID OR ACIDS)  
L27 908 NITRILOAETIC ACID  
(NITRILOAETIC(W)ACID)

=> s (iminodiacetic acid) or IDA  
1234 IMINODIACETIC  
245294 ACID  
164169 ACIDS  
254679 ACID  
(ACID OR ACIDS)  
1186 IMINODIACETIC ACID  
(IMINODIACETIC(W)ACID)  
2011 IDA  
111 IDAS  
2095 IDA  
(IDA OR IDAS)  
L28 3068 (IMINODIACETIC ACID) OR IDA

=> s 126 or 127  
L29 7802 L26 OR L27

=> s 126 and 127  
L30 402 L26 AND L27

=> s (iminodiacetic acid) and IDA  
1234 IMINODIACETIC  
245294 ACID  
164169 ACIDS  
254679 ACID  
(ACID OR ACIDS)  
1186 IMINODIACETIC ACID  
(IMINODIACETIC(W)ACID)  
2011 IDA  
111 IDAS  
2095 IDA  
(IDA OR IDAS)  
L31 213 (IMINODIACETIC ACID) AND IDA

=> s 130 or 131  
L32 609 L30 OR L31

=> s biotin (S) 132  
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
FIELD CODE - 'AND' OPERATOR ASSUMED 'BIOTIN (S) L32'  
30002 BIOTIN

299 BIOTINS  
30023 BIOTIN  
(BIOTIN OR BIOTINS)  
L33 406 BIOTIN (S) L32

=> s 131 (S) biotin?  
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
FIELD CODE - 'AND' OPERATOR ASSUMED 'L31 (S) BIOTIN?'  
36647 BIOTIN?

L34 56 L31 (S) BIOTIN?

=> s 134 not py>2002  
294498 PY>2002  
L35 32 L34 NOT PY>2002

=> d ibib kwic

L35 ANSWER 1 OF 32 PCTFULL COPYRIGHT 2005 Univentio on STN  
ACCESSION NUMBER: 2002094998 PCTFULL ED 20021210 EW 200248  
TITLE (ENGLISH): ANALYZING PHOSPHORYLATED PROTEINS  
TITLE (FRENCH): ANALYSE DE PROTEINES PHOSPHORYLEES  
INVENTOR(S): SINGH, Sharat, 3420 Royal Meadow Lane, San Jose, CA  
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95135, US [IN, US], for US only;  
ZIVIN, Robert, A., 9 Pebble Beach Court, Skillman, NJ  
08558, US [US, US], for US only.  
AGENT: THROWER, Larry, W.S., Perkins Coie LLP, P.O. Box 2168,  
Menlo Park, CA 94026\$, US  
LANGUAGE OF FILING: English  
LANGUAGE OF PUBL.: English  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

NUMBER	KIND	DATE
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WO 2002094998	A2	20021128

DESIGNATED STATES

W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI  
SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW  
GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

RW (ARIPO):

AM AZ BY KG KZ MD RU TJ TM

RW (EAPO):

AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
TR

RW (OAPI):

BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

APPLICATION INFO.:

WO 2002-US16100 A 20020521

PRIORITY INFO.:

US 2001-60/292,548 20010521

US 2001-60/334,902 20011024

DET'D . . . metal ions. Preferably, an IMAC resin comprises a conventional chromatographic matrix such as agarose, acrylamide, silica, or the like. Metal chelators include iminodiacetic acid (IDA), nitriloacetic acid (NTA), tetradentate, and the like. Exemplary metal ions include Cu, Ni<sup>2+</sup>, Zn<sup>2+</sup>, Co<sup>2+</sup>, Fe(III), Sc(III), Al(III), Lu(HI),

Th(III), . . .

antibody together with a secondary antibody having e-tags attached, a haptensed antibody together with a secondary anti-hapten antibody having e-tags attached, a

biotinylated antibody together with streptavidin having e-tags attached, an antibody derivatized with a functionalized polymer that, in turn, has e-tags attached, or.

during the preparation, aberrant cleavage, etc., or other nonspecific degradation products of the polypeptide binding moiety. As above, a ligand, exemplified by biotin, is attached to the polypeptide-binding region so as to be separated from the e-tag reporter upon cleavage.

by the addition of a positively charged moiety or moieties, such as ammonium groups, basic amino acids, etc. Avidin binds to the biotin attached to the detection probe and its degradation products. Avidin is positively charged, while the cleaved electrophoretic tag is negatively charged..

the e-tag reporter, these molecules will migrate toward the opposite electrode from the released e-tag reporter molecules. For example, one could use biotin and streptavidin, where streptavidin carries a positive charge. In the case of a peptide analyte, one embodiment would have cleavage at. . . pyrazolone of the modified methionine, one could bond to an available lysine. The amino group of the pyrazolone would be substituted with biotin. Cleavage would then be achieved with cyanogen bromide, releasing the e-tag reporter, but the biotin would remain with the peptide and any e-tag moiety that was not released from the binding member. Avidin is then used. . .

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#### Example I

##### e-Tag Reporter Assay for Protein Analysis

A. Labeling of aminodextran (MW -500,000) with an e-tag moiety and biotin

Aminodextran was used as a model for demonstrating e-tag reporter release in relation to a

high molecular weight molecule, which also serves. . . number of amino

groups for 1 0 mg aminodextran was calculated as  $2 \times 1 0^{-9}$  moles. For a ratio of 1:4 biotin to e-tag

moiety, the number of moles of biotin-NHS ester employed was  $1.85 \times 1 0^{-6}$ , and the number of moles

of maleimide NHS ester was  $7.4 \times 1 0^{-10.9}$  mg of aminodextran was dissolved in 6 mL of 0.1 %

PBS buffer. 10 mg of Biotin-x-x NHS ester and 23.7 mg of EMCS were dissolved together in 1 mL of DMF and added in 50 gL portions. . .

B. Reaction of biotin and maleimide labeled aminodextran with the moiety, SAMSA.

e-tag moiety to react with maleimide in the aminodextran molecule. For this purpose 0.3 mg (3x  $1 0^{-9}$  moles) of biotin and EMCS labeled with aminodextran

were dissolved in 1 Opl of water.

immunoassay for cytokines

1. 10 gI of assay buffer (0.IX PBS, 40 mg/ml BSA) is mixed with 1 Al (100 nM) of biotin-labeled anti-human IL-4 monoclonal antibody (purchased from Pierce, catalogue number M 13) and 1 Jd of cytokine IL-4 (Pierce, catalogue number R-IL.

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Protocol for direct immunoassay for human IgG

1. 10glofassaybuffer(0.IXPBS,40mg/mIBSA)ismixedwithlgl(100nM)of biotin-labeled anti-human IgG antibody and 1 Jd of human IgG (from Sigma) labeled with an e-tag moiety ranging in concentration from 0.

=>

---Logging off of STN---

=>

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.01	46.79
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.73

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=> file dissab  
COST IN U.S. DOLLARS  
  
FULL ESTIMATED COST

SINCE FILE TOTAL  
ENTRY SESSION  
0.21 0.21

FILE 'DISSABS' ENTERED AT 15:24:09 ON 11 AUG 2005  
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=> s iminodiacetic acid  
56 IMINODIACETIC  
65009 ACID  
23613 ACIDS  
76391 ACID  
(ACID OR ACIDS)  
L1 54 IMINODIACETIC ACID  
(IMINODIACETIC(W)ACID)

=> biotin  
BIOTIN IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s biotin  
898 BIOTIN  
3 BIOTINS  
L2 898 BIOTIN  
(BIOTIN OR BIOTINS)

=> s l1 and l2  
L3 0 L1 AND L2

=> s IDA  
314 IDA  
16 IDAS  
L4 323 IDA  
(IDA OR IDAS)

=> s l3 and l2  
L5 0 L3 AND L2

=> s l4 and l2  
L6 2 L4 AND L2

=> d ibib 1-2

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ACCESSION NUMBER: 2000:14508 DISSABS Order Number: AAI9946849  
TITLE: Synthesis and study of chelating polymers and their application to protein and metal separation from aqueous solutions using novel metal affinity interaction techniques  
AUTHOR: Garcia-Barron, Javier Enrique [Ph.D.]; Guzman, Roberto Z. [adviser]  
CORPORATE SOURCE: The University of Arizona (0009)  
SOURCE: Dissertation Abstracts International, (1999) Vol. 60, No. 9B, p. 4739. Order No.: AAI9946849. 192 pages.  
DOCUMENT TYPE: Dissertation  
FILE SEGMENT: DAI  
LANGUAGE: English

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ACCESSION NUMBER: 97:48929 DISSABS Order Number: AAR9720585  
TITLE: SYNTHESIS AND CHARACTERIZATION OF BIOAFFINITY INTERACTIVE HETEROBIFUNCTIONAL POLY(ETHYLENE GLYCOLS) (PROTEIN IMMOBILIZATION)  
AUTHOR: EHTESHAMI, GHOLAM REZA [PH.D.]; GUZMAN, ROBERTO [adviser]

CORPORATE SOURCE: THE UNIVERSITY OF ARIZONA (0009)  
SOURCE: Dissertation Abstracts International, (1996) Vol. 58, No.  
2B, p. 836. Order No.: AAR9720585. 307 pages.  
DOCUMENT TYPE: Dissertation  
FILE SEGMENT: DAI  
LANGUAGE: English  
ENTRY DATE: Entered STN: 19970630  
Last Updated on STN: 19970630

=> d kwic 2

L6 ANSWER 2 OF 2 DISSABS COPYRIGHT (C) 2005 ProQuest Information and Learning Company; All Rights Reserved on STN  
AB . . . and the metal immobilized on the gels. Trypsin and avidin were bound on columns loaded with a PAB-PEG-chelate and a biotin -PEG-chelate respectively. As a typical example, bound trypsin was eluted from the columns with the trypsin inhibitor, benzamidine, acting as a competitive ligand. The bioligands were eluted reversibly from the IMA-adsorbents, using free IDA as a competitive ligand, using low pH buffers or EDTA. PEG derivatives of 5000 daltons, were chemically fixed to non. . .

=>